

Amendments to the Claims:

Please cancel Claims 8, 22, 28, 34, 35, 60, 62 and 64. Please amend Claims 1, 13-15, 21, 23, 26, 27, 31-33, 39, 41, 43, 45, 48, 50, 53, 59, 61 and 63. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing:

1. (Currently amended) A method for producing a recombinant retroviral particle, said particle comprising an RNA sequence which encodes SDI-1, or a functional analogue or a functional fragment of the RNA sequence which encodes a polypeptide with SDI-1 activity of inhibiting cell proliferation, comprising stably transfecting an isolated producer cell with a retroviral vector comprising ~~a DNA sequence which encodes SDI-1 or a functional analogue or functional fragment which encodes a polypeptide with SDI-1 activity of inhibiting cell proliferation~~ a 5' LTR region of the structure U3-R-U5; one or more sequences selected from coding and noncoding sequences; and a 3' LTR region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence containing a regulatory element or a promoter, followed by the U5 and R region, characterized in that at least one of the coding sequences is a sequence encoding SDI-1, a functional analogue thereof, or a functional fragment thereof, said SDI-1 sequence encoding a polypeptide with SDI-1 activity of inhibiting cell proliferation and being under transcriptional control of said regulatory element or promoter, said producer cell additionally harboring at least one DNA construct coding for proteins required for said retroviral vector to be packaged.
2. (Previously presented) The method of Claim 1 wherein the retroviral vector comprises a DNA sequence encoding SDI-1.
3. (Previously presented) The method of Claim 2 wherein the DNA sequence codes for amino acids 1 to 71 of human SDI-1.

4. (Previously presented) The method of Claim 2 wherein the DNA sequence codes for amino acids 42 to 58 of human SDI-1.
5. (Withdrawn) A retroviral vector according to Claim 1 carrying a DNA sequence which is antisense to the SDI-1 gene.
6. (Withdrawn) A retroviral vector according to Claim 1 wherein the antisense SDI-1 DNA sequence is 10 to 30, preferably 15 to 24 nucleotides long and prepared according to the nucleotide sequence of the SDI-1 gene.
7. (Withdrawn) A retroviral vector according to Claim 6 wherein the antisense SDI-1 DNA sequence is antisense to nucleotides 75 to 93 of the DNA sequence encoding SDI-1.
8. Canceled.
9. (Previously presented) The method of Claim 1 wherein the DNA sequence encoding SDI-1, a functional analogue, or a functional fragment thereof, is under transcriptional control of a target cell specific regulatory element or a target cell specific promoter or an X-ray inducible promoter.
10. (Previously presented) The method of Claim 9 wherein the target cell specific regulatory element is selected from the WAP and MMTV regulatory elements.
11. (Previously presented) The method of Claim 10 wherein the retroviral vector is pLXS-SDI1.
12. (Withdrawn) A retroviral vector according to Claim 10 which is pLX125.IDS.

13. (Currently amended) An isolated producer cell line stably transfected with a retroviral vector comprising ~~a DNA sequence encoding SDI-1, a functional analogue thereof, or a functional fragment thereof, wherein the SDI-1 or functional fragment or functional analogue thereof inhibits cell proliferation~~ a 5' LTR region of the structure U3-R-U5; one or more sequences selected from coding and noncoding sequences; and a 3' LTR region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence containing a regulatory element or a promoter, followed by the U5 and R region, characterized in that at least one of the coding sequences is a sequence encoding SDI-1, a functional analogue thereof, or a functional fragment thereof, said SDI-1 sequence encoding a polypeptide with SDI-1 activity of inhibiting cell proliferation and being under transcriptional control of said regulatory element or promoter, said producer cell line additionally harboring at least one DNA construct coding for the proteins required for said retroviral vector to be packaged.
14. (Currently amended) The isolated producer cell of Claim 13 which is of human origin.
15. (Currently amended) A capsule which encapsulates ~~the producer cell of Claim 13~~ an isolated producer cell line stably transfected with a retroviral vector comprising a DNA sequence encoding SDI-1, a functional analogue thereof, or a functional fragment thereof, wherein the SDI-1 or functional fragment or functional analogue thereof inhibits cell proliferation, said producer cell line additionally harboring at least one DNA construct coding for the proteins required for said retroviral vector to be packaged, said capsule comprising a porous capsule wall being permeable to the retroviral particles produced by said producer cell.
16. (Previously presented) The capsule of Claim 15 wherein said porous capsule wall comprises a polyelectrolyte complex formed from counter charged polyelectrolytes.
17. Canceled.

18. (Withdrawn) A recombinant retroviral particle produced by culturing a packaging cell line according to Claim 13 harbouring a retroviral vector carrying an antisense SDI-1 DNA sequence under suitable conditions optionally followed by isolation of the recombinant retroviral particle produced.
19. (Previously presented) A pharmaceutical composition comprising the producer cell of Claim 13 and a pharmaceutically acceptable carrier or diluent.
20. (Previously presented) A pharmaceutical composition comprising the capsule of Claim 15 and a pharmaceutically acceptable carrier or diluent.
21. (Currently amended) A method of treating ~~disorders or diseases responsive to the anti-proliferative activity of SDI-1~~ a tumor or restenosis in an individual, comprising administering to the individual at the site of the tumor or the restenosis the capsule of Claim 15.
22. Canceled.
23. (Currently amended) The method according to Claim ~~22~~ 21 wherein the ~~cancer~~ tumor is a breast ~~cancer~~ tumor.
24. (Withdrawn) The use of a retroviral particle according to Claim 18 for the preparation of a medicament for the treatment of a disorder or disease responsive to the proliferative activity of antisense SDI-1 DNA sequences.
25. (Withdrawn) The use according to Claim 24 for the preparation of a medicament for the treatment of cancer.

26. (Currently amended) A method for introducing DNA sequences encoding SDI-1, a functional analogue, or a functional fragment thereof, into human cells in vitro comprising infecting ~~a target cell population~~ the human cells with a retroviral particle produced by the producer cell line of Claim 13.
27. (Currently amended) A method for the treatment of a ~~disorder or disease responsive to the antiproliferative activity of SDI-1~~ tumor or restenosis comprising administering to a living animal body, including a human, in need thereof a therapeutically effective amount of a retroviral particle produced by the producer cell line of Claim 13 at the site of the tumor or restenosis.
28. Canceled.
29. (Withdrawn) A method for the treatment of a disorder or disease responsive to the proliferative activity of antisense SDI-1 DNA sequences comprising administering to a living animal body, including a human, in need thereof a therapeutically effective amount of a retroviral particle according to Claim 18.
30. (Withdrawn) A method according to Claim 29 wherein the disorder or disease is cancer, and the administration of the retroviral particle is combined with irradiation.
31. (Currently amended) ~~A~~ The method according to Claim ~~28~~ 27 wherein the recombinant retroviral particle is administered as an injection into the living animal body, including a human, ~~nearby or~~ at the site of the tumor.
32. (Currently amended) A method for the treatment of a ~~disorder or disease responsive to the antiproliferative activity of SDI-1~~ tumor or restenosis comprising administering ~~a~~ the producer cell line according to Claim 13 at the site of the tumor or the restenosis.

33. (Currently amended) A method for producing a recombinant retroviral particle, said particle comprising an RNA sequence which encodes SDI-1, wherein the SDI-1 inhibits cell proliferation, comprising stably transfecting an isolated producer cell with a retroviral vector comprising a ~~DNA sequence which encodes SDI-1 wherein the SDI-1 inhibits cell proliferation~~ a 5' LTR region of the structure U3-R-U5; one or more sequences selected from coding and noncoding sequences; and a 3' LTR region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence containing a regulatory element or a promoter, followed by the U5 and R region, characterized in that at least one of the coding sequences is a sequence encoding SDI-1, said SDI-1 sequence encoding a polypeptide with SDI-1 activity of inhibiting cell proliferation and being under transcriptional control of said regulatory element or promoter, said producer cell additionally harboring at least one DNA construct coding for proteins required for said retroviral vector to be packaged.
34. Canceled.
35. Canceled.
36. (Previously presented) The method of Claim 33 wherein the DNA sequence encoding SDI-1 is under transcriptional control of a target cell specific regulatory element or a target cell specific promoter or an X-ray inducible promoter.
37. (Previously presented) The method of Claim 36 wherein the target cell specific regulatory element is selected from the WAP and MMTV regulatory elements.
38. (Previously presented) The method of Claim 37 wherein the retroviral vector is pLXS-SDI1.

39. (Currently amended) An isolated producer cell stably transfected with a retroviral vector comprising ~~a DNA sequence encoding SDI-1 wherein the SDI-1 inhibits cell proliferation~~ a 5' LTR region of the structure U3-R-U5; one or more sequences selected from coding and noncoding sequences; and a 3' LTR region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence containing a regulatory element or a promoter, followed by the U5 and R region, characterized in that at least one of the coding sequences is a sequence encoding SDI-1, a functional analogue thereof, or a functional fragment thereof, said SDI-1 sequence encoding a polypeptide with SDI-1 activity of inhibiting cell proliferation and being under transcriptional control of said regulatory element or promoter, said producer cell additionally harboring at least one DNA construct coding for the proteins required for said retroviral vector to be packaged.
40. (Previously presented) The producer cell of Claim 39 which is of human origin.
41. (Currently amended) A capsule which encapsulates ~~the producer cell of Claim 39~~ an isolated producer cell line stably transfected with a retroviral vector comprising a DNA sequence encoding SDI-1, wherein the SDI-1 inhibits cell proliferation, said producer cell line additionally harboring at least one DNA construct coding for the proteins required for said retroviral vector to be packaged, said capsule comprising a porous capsule wall being permeable to the retroviral particles produced by said producer cell.
42. (Previously presented) The capsule of Claim 41 wherein said porous capsule wall comprises a polyelectrolyte complex formed from counter charged polyelectrolytes.
43. (Currently amended) A method for introducing DNA sequences encoding SDI-1 into human cells in vitro comprising infecting ~~a target cell population~~ the human cells with a retroviral particle produced by the producer cell line of Claim 39.

44. (Previously presented) A method for producing a recombinant retroviral particle, said particle comprising an RNA sequence which codes for amino acids 1 to 71 of human SDI-1 and inhibits cell proliferation, comprising stably transfecting an isolated producer cell with a retroviral vector comprising a DNA sequence which encodes SDI-1 wherein the SDI-1 inhibits cell proliferation, said producer cell additionally harboring at least one DNA construct coding for proteins required for said retroviral vector to be packaged.
45. (Currently amended) An isolated producer cell stably transfected with a retroviral vector comprising ~~a DNA sequence which codes for amino acids 1 to 71 of human SDI-1 and inhibits cell proliferation~~ a 5' LTR region of the structure U3-R-U5; one or more sequences selected from coding and noncoding sequences; and a 3' LTR region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence containing a regulatory element or a promoter, followed by the U5 and R region, characterized in that at least one of the coding sequences is a sequence encoding amino acids 1-71 of SDI-1, said SDI-1 sequence encoding a polypeptide with SDI-1 activity of inhibiting cell proliferation and being under transcriptional control of said regulatory element or promoter, said producer cell additionally harboring at least one DNA construct coding for the proteins required for said retroviral vector to be packaged.
46. (Previously presented) A capsule which encapsulates the producer cell of Claim 44, said capsule comprising a porous capsule wall being permeable to the retroviral particles produced by said producer cell.
47. (Previously presented) The capsule of Claim 46 wherein said porous capsule wall comprises a polyelectrolyte complex formed from counter charged polyelectrolytes.
48. (Currently amended) A method for introducing DNA sequences encoding SDI-1 into human cells in vitro comprising infecting ~~a target cell population~~ the human cells with a retroviral particle produced by the producer cell line of Claim 45.

49. (Previously presented) A method for producing a recombinant retroviral particle, said particle comprising an RNA sequence which codes for amino acids 42 to 58 of human SDI-1 and inhibits cell proliferation, comprising stably transfecting an isolated producer cell with a retroviral vector comprising a DNA sequence which encodes SDI-1 wherein the SDI-1 inhibits cell proliferation, said producer cell additionally harboring at least one DNA construct coding for proteins required for said retroviral vector to be packaged.
50. (Currently amended) An isolated producer cell stably transfected with a retroviral vector comprising ~~a DNA sequence which codes for amino acids 42 to 58 of human SDI-1 and inhibits cell proliferation~~ a 5' LTR region of the structure U3-R-U5; one or more sequences selected from coding and noncoding sequences; and a 3' LTR region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence containing a regulatory element or a promoter, followed by the U5 and R region, characterized in that at least one of the coding sequences is a sequence encoding amino acids 42-58 of SDI-1, said SDI-1 sequence encoding a polypeptide with SDI-1 activity of inhibiting cell proliferation and being under transcriptional control of said regulatory element or promoter, said producer cell additionally harboring at least one DNA construct coding for the proteins required for said retroviral vector to be packaged.
51. (Previously presented) A capsule which encapsulates the producer cell of Claim 50, said capsule comprising a porous capsule wall being permeable to the retroviral particles produced by said producer cell.
52. (Previously presented) The capsule of Claim 51 wherein said porous capsule wall comprises a polyelectrolyte complex formed from counter charged polyelectrolytes.
53. (Currently amended) A method for introducing DNA sequences encoding SDI-1 into human cells in vitro comprising infecting ~~a target cell population~~ the human cells with a retroviral particle produced by the producer cell line of Claim 50.

54. (Previously presented) A recombinant retroviral particle produced by the method of Claim 1.
55. (Previously presented) A pharmaceutical composition comprising the retroviral particle of Claim 54 and a pharmaceutically acceptable carrier or diluent.
56. (Previously presented) A capsule which encapsulates an isolated producer cell stably transfected with a retroviral vector comprising a DNA sequence encoding SDI-1, said producer cell additionally harboring at least one DNA construct coding for the proteins required for said retroviral vector to be packaged, said capsule comprising a porous capsule wall being permeable to the retroviral particles produced by said producer cell.
57. (Previously presented) The capsule of Claim 56 wherein said porous capsule wall comprises a polyelectrolyte complex formed from counter charged polyelectrolytes.
58. (Previously presented) A pharmaceutical composition comprising the capsule of Claim 56 and a pharmaceutically acceptable carrier or diluent.
59. (Currently amended) A method of treating ~~disorders or diseases responsive to the anti-proliferative activity of SDI-1~~ a tumor or restenosis in an individual, comprising administering to the individual the capsule of Claim 56 at the site of the tumor or the restenosis.
60. Canceled.
61. (Currently amended) The method according to Claim ~~60~~ 59 wherein the ~~cancer~~ tumor is a breast cancer tumor.
62. Canceled.

63. (Currently amended) A method for the treatment of a ~~disorder or disease responsive to the antiproliferative activity of SDI-1~~ tumor or restenosis comprising ~~implantating~~ implanting ~~an encapsulated packaging cell line~~ a capsule comprising encapsulated cells having a core ~~containing~~, wherein the core comprises packaging cells harbouring:
- a) a retroviral vector carrying a DNA sequence encoding SDI-1, a functional analogue, a fragment thereof or an antisense SDI-1 DNA sequence; and
 - b) at least one DNA construct coding for the proteins required for said retroviral vector to be packaged
- and wherein a porous capsule wall ~~surrounding~~ surrounds said core, said porous capsule wall being permeable to retroviral particles produced by the packaging cells, into the living animal body, including a human, ~~nearby or~~ at the site of the tumor.
64. Canceled.